What is claimed is

1. A device for compensating for fluctuations in the light which is emitted by a light source and propagates along a light path, comprising:

a first light-sensitive sensor, which detects the intensity of the light at a first location along the light path in a spatially resolved manner and generates electrical image signals,

a second light-sensitive sensor, which detects the intensity of the light at a second location along the light path and generates electrical output signals, wherein the second sensor detects the light intensity in a spatially resolved manner,

an evaluation circuit is provided, which receives both the output signals of the first sensor and the output signals of the second sensor as input signals and corrects the input signals originating from the first sensor in a manner dependent on the input signals originating from the second sensor in such a way that the output signals of the evaluation circuit are essentially independent of fluctuations in the light intensity.

2. The device as claimed in claim 1, wherein the second sensor is designed as a linear array sensor.

3. The device as claimed in claim 1, wherein the second sensor has a lower spatial resolution than the first sensor.

4. The device as claimed in claim 3, wherein the second sensor is formed from two photodetectors spaced apart from one another.

5. The device as claimed in claim 1, wherein the second sensor is suitable for detecting the spectral distribution of the light.

6. The device as claimed in claim 4, wherein the second sensor is suitable for detecting the spectral distribution of the light.

7. The device as claimed in claim 4, wherein the photodetectors are arranged in an integration cylinder.

8. The device as claimed in claim 4, wherein one of the photodetectors is coupled into the light path of the illumination device by means of an optical coupling element.

9. A method for correcting fluctuations in the light emitted by a light source, which comprises the following steps:
a) determining a spatially resolved illumination intensity,
b) calculating a deviation of the spatially resolved illumination intensity from a nominal desired value, and
c) correcting image signals output by an image sensor in order to compensate for the deviation of the spatially resolved illumination intensity from the nominal desired value.

10. The method as claimed in claim 9, characterized by determining an average illumination intensity.

11. The method as claimed in claim 10, characterized by subtracting the average illumination intensity from the spatially resolved illumination intensity.

12. The method as claimed in claim 9, characterized by carrying out an interpolation between individual values of the spatially resolved illumination intensity.

13. The method as claimed in claim 9, characterized by correcting the image signals with a multiplicative correction factor which compensates for different spatially resolved illumination intensities.

14. A film scanner, which is equipped with an illumination device as claimed in claim 1.